IN THE CLAIMS:

Claims 1-18 have been amended herein. All of the pending claims 1 through 18 are presented below. This listing of claims will replace all prior versions and listings in the application. Please enter these claims as amended.

1. (Currently Amended) A method for processing semiconductor dice on a wafer ~~in a process~~ comprising:

determining defects on ~~said~~ the semiconductor dice on ~~said~~ the wafer;

classifying each of ~~said~~ the defects by size and location, ~~said~~ determining and ~~said~~ classifying comprising classifying each of ~~said~~ the defects into one of size range populations of defects;

assigning a weight to ~~said~~ each of ~~said~~ the defects representing an estimated effect of ~~said~~ each ~~of said defects~~ defect on die yield for ~~said~~ the semiconductor dice;

determining an estimated die yield loss (DYL) for each semiconductor die of ~~said~~ the semiconductor dice based on number and weight of ~~said~~ the defect(s) on ~~said~~ each semiconductor die of ~~said~~ the semiconductor dice, determining ~~said~~ the estimated ~~die yield loss (DYL)~~ DYL including calculating an estimated die yield loss having lower and upper limits;

summing all ~~said~~ of the DYL of ~~said~~ the semiconductor dice on ~~said~~ the wafer to obtain a wafer yield loss (WYL);

subdividing the defects into a plurality of size range populations of defects for ~~said~~ the semiconductor dice; and

determining a relative contribution of each size range population of defects of ~~said~~ the plurality of ~~said~~ the semiconductor dice to ~~said~~ the wafer yield loss WYL.

2. (Currently Amended) The method of claim 1, wherein ~~said~~ determining ~~said~~ the ~~estimated die yield loss (DYL)~~ DYL comprises calculating an estimated die yield loss having lower and upper limits of zero and 1.0, respectively.

3. (Currently Amended) The method of claim 2, wherein ~~said~~ the lower limit comprises a representation of no yield loss attributable to ~~said~~ the defects and ~~said~~ the upper limit comprises a representation of fatal yield loss attributable to ~~said~~ the defects.

4. (Currently Amended) The ~~processing~~ method of claim 1, wherein ~~said~~ subdividing ~~said~~ the defects into ~~said~~ the plurality of size range populations of defects comprises subdividing ~~said~~ the defects into a plurality of 0 to 10 size range populations.

5. (Currently Amended) A method for semiconductor dice on a wafer comprising:

determining defects on ~~said~~ the semiconductor dice on ~~said~~ the wafer;

classifying each of ~~said~~ the defects by size and location, ~~said inspecting~~ determining and ~~said~~ classifying comprising classifying ~~said~~ each of ~~said~~ the defects into one of size range populations of defects;

assigning a weight to ~~said~~ each of ~~said~~ the defects representing an estimated effect of ~~said~~ the defects on die yield for ~~said~~ the semiconductor dice;

determining an estimated die yield loss (DYL) for each semiconductor die of ~~said~~ the semiconductor dice based on number and weight of ~~said~~ the ~~defect(s)~~ defects on ~~said~~ each semiconductor die of ~~said~~ the semiconductor dice;

summing all DYL of ~~said~~ the semiconductor dice on ~~said~~ the wafer to obtain a wafer yield loss (WYL);

subdividing the defects into a plurality of size range populations of defects; and

determining a relative contribution of each size range population of defects of ~~said~~ the plurality to ~~said wafer yield loss~~ the WYL, ~~said~~ wherein determining the relative contribution of ~~said~~ each size range population of defects of ~~said~~ the plurality to ~~said~~ the wafer yield loss comprises:

discarding data for ~~said~~ each size range population of defects of ~~said~~ the plurality and calculating, in turn, a drop in ~~said wafer yield loss~~ the WYL for combined size range populations excepting the discarded data;

summing the calculated ~~wafer yield losses~~ WYL to obtain a drop sum;

dividing ~~said~~ the drop sum to determine a relative drop attributable to ~~said~~ each size range population of defects of ~~said~~ the plurality; and

randomly selecting defects from ~~said~~ each size range population of defects of the plurality.

6. (Currently Amended) The ~~processing~~ method of claim ~~2~~ 5, further comprising:

randomly selecting defects from ~~said~~ each size range population of defects of ~~said~~ the plurality, a number selected from ~~said~~ each size range population of defects of ~~said~~ the plurality in proportion to ~~said~~ the relative contribution thereof, ~~said~~ the randomly selected defects being weighted to represent defects ~~having~~ having a greatest effect on yield losses.

7. (Currently Amended) The ~~processing~~ method of claim 6, further comprising:

reviewing ~~said~~ the randomly selected defects and determining in-line action required to reduce wafer yield losses.

8. (Currently Amended) The ~~processing~~ method of claim 7, wherein ~~said~~ reviewing ~~said~~ the randomly selected defects includes visual inspection by a microscope.

9. (Currently Amended) The ~~processing~~ method of claim 7, wherein ~~said~~ determining in-line action comprises determining if an individual semiconductor die of ~~said~~ the semiconductor dice on ~~said~~ the wafer is acceptable to proceed in a manufacturing process.

10. (Currently Amended) The ~~processing~~ method of claim 5, wherein ~~said inspecting~~ determining defects on the ~~said~~ semiconductor dice is performed by an automated surface inspection tool.

11. (Currently Amended) A method for semiconductor dice in wafer form comprising:

determining defects of ~~said~~ the semiconductor dice;

classifying each of ~~said~~ the defects by size and location;

assigning a weight to ~~said~~ each of ~~said~~ the defects representing an estimated effect of ~~said~~ each ~~of said defects~~ defect on die yield;

determining an estimated die yield loss (DYL) for each of the semiconductor dice ~~die~~ based on number and weight of ~~said defect(s)~~ the defects on ~~said~~ each ~~said die~~ of ~~said~~ the semiconductor dice;

summing all DYL of ~~said~~ the semiconductor dice on ~~said~~ the wafer to obtain a wafer yield loss (WYL);

subdividing the defects into a plurality of size range populations of defects;

determining a relative contribution of each size range population of defects of ~~said~~ the plurality to ~~said wafer yield loss~~ the WYL;

randomly selecting defects from ~~said~~ each size range population of defects of the plurality, a number selected from ~~said~~ each size range population of defects of the plurality in proportion to ~~said~~ the relative contribution thereof, ~~said~~ the randomly selected defects weighted to represent defects ~~having~~ having a greatest effect on yield losses; and

reviewing ~~said~~ the randomly selected defects.

12. (Currently Amended) The method of claim 11, further comprising:

reviewing ~~said~~ the randomly selected defects and determining in-line action required to reduce ~~said~~ the ~~wafer yield losses~~ WYL.

13. (Currently Amended) The ~~processing~~ method of claim 11, wherein ~~said inspecting on said wafer said dice~~ determining defects and ~~said~~ classifying each of ~~said~~ the defects comprises classifying each of ~~said~~ the defects into one of ~~said~~ the plurality of size range populations of defects.

14. (Currently Amended) The ~~processing~~ method of claim 11, wherein ~~said~~ determining ~~said estimated die yield loss (DYL)~~ the DYL comprises calculating an estimated die yield loss having lower and upper limits of zero and 1.0, respectively.

15. (Currently Amended) The ~~processing~~ method of claim 14, wherein ~~said~~ the lower limit comprises a representation of no yield loss attributable to ~~said~~ the defects and ~~said~~ the upper limit comprises a representation of fatal yield loss attributable to ~~said~~ the defects.

16. (Currently Amended) The ~~processing~~ method of claim 11, wherein ~~said~~ subdividing ~~said~~ the defects into ~~said~~ the plurality of size range populations of defects comprises subdividing ~~said~~ the defects into a plurality of 0 to 10 size range populations.

17. (Currently Amended) The ~~processing~~ method of claim 11, wherein ~~said~~ determining the relative contribution of ~~said~~ each size range population of defects of ~~said~~ the plurality to ~~said wafer yield loss~~ the WYL comprises:

discarding data for ~~said~~ each size range population of defects of ~~said~~ the plurality and calculating, in turn, a drop in ~~said wafer yield loss~~ WYL for combined size range populations excepting the discarded data;

summing the calculated drop in ~~wafer yield losses~~ WYL to obtain a drop sum; and

dividing ~~said~~ the drop sum to determine a relative drop attributable to ~~said~~ each size range population of defects of ~~said~~ the plurality.

18. (Currently Amended) The method of claim 12, wherein ~~said~~ determining in-line action required to reduce ~~said wafer yield losses~~ the WYL comprises determining if an individual semiconductor die of ~~said~~ the semiconductor dice ~~on said~~ in wafer form is acceptable to proceed in a manufacturing process.